

**Is the Internet a U.S. Invention? – An Economic and Technological History of
Computer Networking**

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1. Introduction

The Internet is the world's largest computer network—a steadily growing collection of more than 70 million computers that communicate with one another using a shared set of standards and protocols. Together with the World Wide Web, a complementary software innovation that dramatically increased the accessibility of the network for many users, the Internet helped stimulate a communications revolution that has changed the way that individuals and institutions use computers in a wide variety of activities. The Internet and World Wide Web jointly comprise a “general purpose technology,” an invention with the potential to transform the dissemination of information in a global economy that relies ever more heavily on knowledge.¹

The Internet was created through a series of inventions and innovations in fields ranging from computing and communications to utility regulation, business and finance. Although its development and deployment occurred largely within the United States, the inventions embodied in the Internet originated in a more diverse set of industrial economies. Nonetheless, the United States consistently was among the first nations to improve and transform these inventions into components of a national and global network or networks, and was an early adopter of new applications. This paper addresses the question of why other nations, including several that made important inventive contributions to the Internet, failed to play a larger role in its development, especially in the creation of new business organizations, governance institutions, and applications. Our explanation relies on a comparison of the US “national innovation system” with those of other developed countries.

The origins and evolution of the Internet highlight several nationally unique characteristics of the U.S. innovation system that have endured in the face of economic globalization and domestic institutional change. At the same time, several characteristics of the U.S. economy that contributed to its early 20th-century technological development,

¹ Lipsey, Bekar and Carlaw (1998) use four criteria to define a technology as a GPT—the ability to make dramatic technical improvements, the existence of a variety of technological complementarities, and the breadth and scope of applications for the technology. Although they argue that Information Technology represents a single GPT, we feel that these criteria apply equally well to the Internet.